IN THE CLAIMS

Please amend the claims as follows:

1.   (Currently Amended) A method of providing location services (LCS), comprising:

receiving a request for location information for a mobile station;

determining whether present location information is available from a cache;

performing authorization for location determination based on a first security procedure;

performing authentication for the location determination based on the first security procedure;

performing location determination via a first set of at least one network entity to obtain location information for the mobile station responsive to the request for the location information when present location information for the mobile station is unavailable;

performing authorization for location disclosure based on a second security procedure, independent of the first security procedure;

performing authentication for the location disclosure based on the second security procedure; and

performing location disclosure via a second set of at least one network entity to provide the location information for the mobile station responsive to the request for the location information, and skipping the location determination when the present location information for the mobile station is available from the cache.

2.   (Canceled)

3.   (Currently Amended) The method of claim 12, wherein the first security procedure is based on an MD-5 algorithm and the second security procedure is based on an Authentication and Key Agreement (AKA) procedure.

4.   (Original) The method of claim 1, further comprising:

performing a first session key setup to obtain a first session key, wherein the first session key is used for authentication and encryption of messages exchanged with the first set of at least one network entity; and

performing a second session key setup to obtain a second session key, wherein the second session key is used for authentication and encryption of messages exchanged with the second set of at least one network entity.

5.   (Original) The method of claim 1, wherein the location determination and the location disclosure are performed in two separate LCS sessions.

6.   (Canceled)

7.   (Original) The method of claim 1, wherein the first set of at least one network entity is located in a serving network for the mobile station and the second set of at least one network entity is located in a home network for the mobile station.

8.   (Original) The method of claim 1, wherein the location disclosure is performed by a location client and a location server.

9.   (Original) The method of claim 8, wherein the second set of at least one network entity includes an LCS provider, and wherein the location client is located in the mobile station or the LCS provider.

10.   (Original) The method of claim 8, wherein the second set of at least one network entity includes an LCS server, and wherein the location server is located in the mobile station or the LCS server.

11.   (Original) The method of claim 1, wherein the first set of at least one network entity includes a position determining entity (PDE).

12.   (Original) The method of claim 11, wherein the first set of at least one network entity further includes a serving mobile positioning center (SMPC).

3

13.   (Original) The method of claim 11, wherein the first set of at least one network entity further includes a home authentication, authorization, and accounting entity (H-AAA).

14.   (Original) The method of claim 1, wherein the second set of at least one network entity includes an LCS server.

15.   (Original) The method of claim 14, wherein the second set of at least one network entity further includes a home authentication, authorization, and accounting (H-AAA) entity.

16.   (Original) The method of claim 1, wherein the location information for the mobile station comprises a location estimate for the mobile station.

17.   (Previously presented) The method of claim 16, wherein the location information for the mobile station further comprises an uncertainty for the location estimate for the mobile station.

18.   (Currently Amended) An apparatus comprising:
        means for receiving a request for location information for a mobile station;
        means for determining whether present location information is available from a cache;
        means for performing authorization for location determination based on a first security procedure;
        means for performing authentication for the location determination based on the first security procedure;
        means for performing location determination via a first set of at least one network entity to obtain location information for the mobile station responsive to the request for the location information when present location information for the mobile station is unavailable from a cache;

means for performing authorization for location disclosure based on a second security procedure, independent of the first security procedure;

means for performing authentication for the location disclosure based on the second security procedure; and

means for performing location disclosure via a second set of at least one network entity to provide the location information for the mobile station responsive to the request for the location information, and skipping the location determination when the present location information for the mobile station is available from the cache.

19.   (Canceled)

20.   (Original) The apparatus of claim 18, further comprising:

means for performing a first session key setup to obtain a first session key, wherein the first session key is used for authentication and encryption of messages exchanged with the first set of at least one network entity; and

means for performing a second session key setup to obtain a second session key, wherein the second session key is used for authentication and encryption of messages exchanged with the second set of at least one network entity.

21.   (Canceled)

22.   (Previously Presented) A wireless mobile station comprising:

a processor operative to:

receive a request for location information for the mobile station;

determine whether present location information is available from a cache;

perform authorization for location determination based on a first security procedure;

perform a first function to obtain location information for the mobile station responsive to the request for the location information when present location information for the mobile station is unavailable from a cache;

perform authorization for location disclosure based on a second security procedure, independent of the first security procedure; and

perform a second function to provide the location information for the mobile station responsive to the request for the location information, and skipping the first function to obtain the location information when the present location information for the mobile station is available from the cache,

wherein the first function interacts with at least one peer first function located in a first set of at least one network entity to obtain the location information, and wherein the second function interacts with at least one peer second function located in a second set of at least one network entity to provide the location information.

23.   (Previously Presented) A program embodied on a tangible storage medium, the program comprising executable instructions to:

receive a request for location information for a mobile station;

determine whether present location information is available from a cache;

perform authorization for location determination based on a first security procedure;

perform a first function to obtain location information for the mobile station responsive to the request for the location information when present location information for the mobile station is unavailable from a cache, wherein the first function interacts with at least one peer first function located in a first set of at least one network entity to obtain the location information;

perform authorization for location disclosure based on a second security procedure, independent of the first security procedure; and

perform a second function to provide the location information for the mobile station responsive to the request for the location information, and skipping the first function to obtain the location information when the present location information for the mobile station is available from the cache, wherein the second function interacts with at least one peer second function located in a second set of at least one network entity to provide the location information.

24.   (Currently Amended) A method of providing location services (LCS), comprising:

receiving a request for location information for a mobile station;

performing a first session key setup to obtain a first session key, wherein the first session key is used for authentication and encryption of messages exchanged with a first set of at least one network entity;

performing location determination via a first secure LCS session using the first session key to obtain location information for the mobile station responsive to a request for the location information when the present location information for the mobile station is unavailable from a cache;

performing a second session key setup to obtain a second session key, wherein the second session key is used for authentication and encryption of messages exchanged with a second set of at least one network entity; and

performing location disclosure via a second secure LCS session using the second session key, independent of the first secure LCS session, to provide the location information for the mobile station responsive to the request for the location information, and skipping the location determination when the present location information for the mobile station is available from the cache.

25.   (Previously Presented) The method of claim 24, wherein the first and second secure LCS sessions are performed at different times.

26.   (Currently Amended) The method of claim 24, further comprising:
performing ~~authentication and~~ authorization for the first secure LCS session based on a first security procedure; and
performing ~~authentication and~~ authorization for the second secure LCS session based on a second security procedure.

27.   (Canceled)

28.   (Previously Presented) The method of claim 24, further comprising:
providing a first call detail record (CDR) for the first secure LCS session; and
providing a second CDR for the second secure LCS session.

29.   (Currently Amended) An apparatus comprising:

means for receiving a request for location information for a mobile station;

means for performing a first session key setup to obtain a first session key, wherein the first session key is used for authentication and encryption of messages exchanged with a first set of at least one network entity;

means for performing location determination via a first secure LCS session using the first session key to obtain location information for the mobile station responsive to the request for the location information when present location information for the mobile station is unavailable from a cache;

performing a second session key setup to obtain a second session key, wherein the second session key is used for authentication and encryption of messages exchanged with a second set of at least one network entity; and

means for performing location disclosure via a second secure LCS session using the second session key, independent of the first secure LCS session, to provide the location information for the mobile station responsive to the request for the location information, and skipping the location determination when the present location information for the mobile station is available from the cache.

30.   (Currently Amended) A method of providing location services (LCS), comprising:

performing authorization for location determination responsive to a first request for location information based on a first security procedure;

authenticating messages between a mobile station and a serving network based on a first session obtained in the first security procedure;

obtaining location information for the mobile station responsive to the first request for location information for the mobile station when present location information for the mobile station is unavailable from a cache;

performing authorization for location disclosure responsive to the first request for location information based on a second security procedure, independent of the first security procedure;

providing the location information to a first application responsive to the first request for the location information for the mobile station, and skipping the obtaining the location

8

information when the present location information for the mobile station is available from the cache;

performing authorization for location disclosure responsive to a second request for location information based on the second security procedure;

authenticating location disclosure messages exchanged between the mobile station and a home network using a second session obtained in the second security procedure; and

providing the location information to a second application responsive to the second request for the location information for the mobile station, and skipping the obtaining the suitable location information when the present location information for the mobile station is available from the cache.

31.   (Original) The method of claim 30, wherein the location information is obtained by performing location determination once via one location determination session, and wherein the location information is provided to the first and second applications by performing location disclosure twice via two location disclosure sessions.

32.   (Original) The method of claim 30, further comprising:
caching the location information in the mobile station or a network entity.

33.   (Original) The method of claim 30, further comprising:
providing a first call detail record (CDR) for providing the location information to the first application; and

providing a second CDR for providing the location information to the second application.

34.   (Original) The method of claim 30, wherein the first application is located in a first network and the second application is located in a second network.

35.   (Previously Presented) An apparatus comprising:
means for performing authorization for location determination responsive to a first request for location information based on a first security procedure;

means for obtaining location information for the mobile station responsive to the first request for location information for the mobile station when present location information for the mobile station is unavailable from a cache;

means for performing authorization for location disclosure responsive to the first request for location information based on a second security procedure, independent of the first security procedure;

means for providing the location information to a first application responsive to the first request for the location information for the mobile station, and skipping the obtaining the location information when the present location information for the mobile station is available from the cache;

means for performing authorization for location disclosure responsive to a second request for location information based on the second security procedure; and

means for providing the location information to a second application responsive to the second request for the location information for the mobile station, and skipping the obtaining the location information when the present location information for the mobile station is available from the cache.

36.   (Currently Amended) A method of providing location services (LCS), comprising:

receiving a request for location information for a mobile station;

determining whether present location information is available from a cache;

performing authorization for location determination based on a first security procedure;

performing location determination via at least one network entity in a serving network to obtain location information for the mobile station responsive to a request for the location information when present location information for the mobile station is unavailable from a cache;

performing authorization for location disclosure based on a second security procedure, independent of the first security procedure; and

performing location disclosure via at least one network entity in a home network to provide the location information for the mobile station responsive to the request for the location information using a disclosure session key limited to entities within the home

network, and skipping the location determination when the present location information for the mobile station is available from the cache.

37. (Currently Amended) The method of claim 36, further comprising:

performing a first session key setup to obtain a first session key, wherein the first session key is used for authentication and encryption of messages exchanged with the at least one network entity in the serving network; and

performing a second session key setup to obtain a second session key for use as the disclosure session key, wherein the second session key is used for authentication and encryption of messages exchanged with the at least one network entity in the home network.

38. (Original) The method of claim 36, wherein the at least one network entity in the serving network includes a serving mobile positioning center (SMPC), the method further comprising:

determining an Internet Protocol (IP) address of the SMPC.

39. (Original) The method of claim 38, wherein the IP address of the SMPC is determined using a fully qualified domain name for the SMPC.

40. (Original) The method of claim 38, wherein the location disclosure is performed via the SMPC.

41. (Original) The method of claim 36, further comprising:

sending a message to the mobile station to trigger the mobile station to initiate a LCS session for performing location determination.

42. (Original) The method of claim 36, further comprising:

caching the location information in the mobile station, a network entity in the serving network, a network entity in the home network, or a combination thereof.

43. (Currently Amended) An apparatus comprising:

means for receiving a request for location information for a mobile station;

11

means for determining whether present location information is available from a cache;

means for performing authorization for location determination based on a first security procedure;

means for performing location determination via at least one network entity in a serving network to obtain location information for the mobile station responsive to a request for the location information when present location information for the mobile station is unavailable from a cache;

means for performing authorization for location disclosure based on a second security procedure, independent of the first security procedure; and

means for performing location disclosure via at least one network entity in a home network to provide the location information for the mobile station responsive to the request for the location information using a disclosure session key limited to entities within the home network, and skipping the location determination when the present location information for the mobile station is available from the cache.

44.   (Currently Amended) A method of providing location services (LCS), comprising:

receiving a request for location disclosure;

authenticating and authorizing the request using a secure disclosure session key and a secure disclosure session;

determining whether cached location information is available;

if the cached location information is available, responding to the request for location disclosure with the location information in the secure disclosure session;

if the cached location information is not available, initiating a request for location determination;

establishing a secure determination session, independent of the secure disclosure session; and

communicating location information within the secure determination session.

45.   (Currently Amended) The method of claim 44, wherein authenticating and authorizing the request comprises:

receiving a request for a the secure disclosure session key; and

providing the secure disclosure session key in response to successful authentication and validation of the request for the secure session key.